

POINT-TO-MULTIPOINT NETWORK INTERFACE

ABSTRACT OF THE DISCLOSURE

A point-to-multipoint network interface is provided that is simpler and less costly to implement than conventional Ethernet switches. The interface includes a plurality of downstream transmitters for transmitting data packets to a plurality of end user devices, a plurality of downstream receivers for receiving data packets from the plurality of end user devices, an upstream transmitter and an upstream receiver. A multiplexer within the interface multiplexes data packets received from the end user devices into a stream of data packets for transmission to a higher level node regardless of the destination address of the data packets. Conversely, a demultiplexer within the interface demultiplexes a stream of data packets received from the higher level node into individual data packets for selective transmission to one of the plurality of end user devices. The interface can support asymmetrical transmission rates on the upstream and downstream channels between the interface and the end user devices.